

Specification Amendments

Paragraphs beginning on page 10, line 5

To improve the start time of the MEMS gyroscope system 200, noise 220 may be injected into the drive electronics 218. The noise 220 may be injected into the drive electronics 218 after the system power source has been applied to the MEMS gyroscope 216, but substantially before the MEMS gyroscope 216 has reached full power. By injecting the noise 220 prior to the MEMS gyroscope 216 reaching full power, the start time of the MEMS gyroscope 216 may be reduced. Once the drive electronics 218 locks onto the tuning fork frequency, the injection of the noise 220 may be discontinued.

Fig. 3 shows a schematic of a noise source 300. The noise source 300 may be used to provide the noise 220 in a preferred embodiment; however, noise source 300 is just one example of a circuit that may generate noise. Many different combinations of electronic circuitry may be capable of generating noise and may also be used in this embodiment. The noise source 300 may provide bandwidth limited white noise. Preferably, the tuning fork frequency of the at least one proof mass 202a, 202b may be located substantially within the bandwidth of the injected noise 220. For example, the bandwidth of the noise 220 may be centered substantially at the tuning fork frequency and may be substantially +/- 1000 Hertz wide. By designing the noise source 300 to inject noise with bandwidth characteristics as described above, the drive electronics 218 may lock onto the tuning fork frequency quicker and may substantially reduce the number of times that the MEMS gyroscope system 200 fails to start.